

## Canadian Arctic Shipping Assessment

Gunnar Sander, September 2011

<b>1. Project / publication</b>	<p>Mariport Group Ltd (2007): <i>Canadian Arctic Shipping Assessment. Main Report</i>. June 2007, 220 pages.</p> <p>A draft version is available at <a href="http://arcticportal.org/uploads/Yo/7a/Yo7actL5VF7Y-902IYWytQ/5.6-Regional-Case-Study-Canada-Canadian-Arctic-Shipping-Assessment-Report.pdf">http://arcticportal.org/uploads/Yo/7a/Yo7actL5VF7Y-902IYWytQ/5.6-Regional-Case-Study-Canada-Canadian-Arctic-Shipping-Assessment-Report.pdf</a></p>
<b>2. Initiator</b>	<p>Transport Canada, which commissioned Mariport Group as consultant.</p>
<b>3. Objective</b>	<p>The objective of the report was to provide a resource document for future policy-making with respect to marine transportation in Canadian Arctic waters.</p> <p>The report also was used as a regional case study in the Arctic Marine Shipping Assessment (AMSA). See page 112-115 in the AMSA main report available at <a href="http://www.pame.is/images/stories/PDF_Files/AMSA_2009_Report_2nd_print.pdf">http://www.pame.is/images/stories/PDF_Files/AMSA_2009_Report_2nd_print.pdf</a></p>
<b>4. Geographical delimitation</b>	<p>Canadian Arctic waters, here meaning Hudson Bay and the waters of the Canadian archipelago, plus Mackenzie river up to Great Slave Lake (see map at page 9 of report).</p> <p>Socio-economic analyses seem to cover broader areas of Nunavut, North West Territory coastal communities, Nunavik and the coastal Cree communities of Quebec, Ontario and Manitoba.</p>
<b>5. Time horizon</b>	<p>Climate forecasts were provided to 2050. Other forecasts are to 2020.</p>
<b>6. Thematic focus</b>	<p>The key drivers in the report are climate change and socio-economic conditions in the region. Based on this, current and future maritime activity is discussed.</p>
<b>7. Images of the future</b>	<p>Forecasts of different segments of maritime traffic to 2020 are made. In the AMSA report, these are summarized as follows</p> <ul style="list-style-type: none"> <li>• <i>Dry bulk carriage</i> stimulated by resource development: definitive forecasts of substantive marine transportation projects are, for now, Mary River and High Lake developments.</li> <li>• <i>Liquid bulk carriage</i> stimulated by resource development: minimal forecasts due to expectations that any substantive products in the Beaufort Sea will move out by pipeline.</li> <li>• <i>Supply/resupply</i>: some important but manageable expansion in shipping activity is forecast, related to growing populations and for movement of supplies and equipment in support of exploration projects.</li> <li>• <i>Cruise shipping</i>: projections of modest but largely unpredictable growth.</li> <li>• <i>Container, bulk transit traffic</i>: no substantive activity seen in this sector in the timeframe under examination.</li> <li>• <i>Other</i>: unknown activity for fishing, seismic, etc.</li> </ul> <p>All these segments are destination shipping. Regarding transit passage through the Northwest Passage, the summary concludes the discussion (p 5):</p> <p>“Sensitivity to scheduling delays is expected to prevent container shipping from using the Northwest Passage – certainly within the 2020 timeframe. Unless climate change advances significantly faster than anticipated, substantial movements of bulk cargo through the Northwest Passage also appear improbable within this</p>

	<p>period. There may however be increased numbers of opportunity transits, including project cargo.”</p> <p>(See also major findings in text box at page 114 of AMSA)</p>
<b>8. Key driving forces</b>	<p>Main drivers are climate change and socio-economic conditions. Regarding climate change, future ice conditions in the NW passage is discussed with increased accessibility and longer shipping season as probable changes. Depth restrictions, great variability depending on weather conditions, ice chokepoints and drifting ice are also important factors for navigability. Socio-economic factors highlighted in the summary are population dynamics (young population with high fertility rates), resource availability, infrastructure deficits and anticipated restrictions on development due to environmental concerns and at least up till now, high costs.</p>
<b>9. Uncertainties/wildcards</b>	<p>No particular wildcards are highlighted, but uncertainties in a lot of the factors mentioned above are discussed.</p> <p>It is interesting to see the anticipation that oil and gas shipping is expected to be low due to the construction of the Mackenzie river pipeline within the study time frame. It is however noted that this will depend on North American gas prices – and, it should be added now, competition from other pipeline initiatives.</p>
<b>10. Accomplishment and collaboration</b>	<p>The study is expert-based.</p>
<b>11. Method</b>	<p>The study is a mixture of quantitative and qualitative approaches.</p> <p>Data for key variables for current situations particularly on transport patterns were not easily available in all cases, limiting the possibilities to make quantitative projections. Projections of the population in different settlement were made and used especially in anticipating future traffic for community re-supply. (see chapter 6 and 9)</p> <p>For transit traffic, a model was made for the process through which a ship operator makes a choice between alternative routes (the Panama Canal, Suez Canal, Northern Sea Route and Northwest Passage). See documentation in section 7.2 of the report.</p>
<b>12. Sources of information</b>	<p>The study draws on a wide range of resources, which is referred in an extensive bibliography.</p>
<b>13. Strengths</b>	<p>The study seems to give a good overview of the most relevant issues regarding shipping in the NWP.</p>
<b>14. Weaknesses</b>	<p>Nothing particular to note.</p>
<b>15. Attention and significance</b>	<p>The publication of main findings in AMSA has given it a wider audience than a pure Canadian report otherwise would have received. Apart from this, it is hard to comment upon the impact of the report.</p>
<b>16. Relevance for the Fram Centre</b>	<p>The quantitative model for alternative choice of routes should be studied more in detail (see question 11 with reference to section 7.2 in the report).</p>